

Amendments to the Specification

Please replace the paragraph beginning on page 17, line 6, with the following rewritten paragraph.

In other embodiments, temperature controllers 36 may be positioned such that the zones 40, 42, and 44 and any zones in between zones 40, 42, and 44 are arranged in neither ascending ~~or nor~~ descending order but rather, in a random order based upon their respective temperature ranges. In such an embodiment, the temperature ranges of each zone is still preferably distinct, but the temperature range of zone 44 may be higher or lower than the temperature range of zone 42 and the temperature range of zone 42 may respectively be lower or higher than the temperature range of zone[[44]]40. Such mixed order of temperature ranges may be advantageous for processes in which the chemical composition of a fluid is altered at a particular temperature, but may be used at a lower or higher temperature after such an alteration.

Please replace the paragraph beginning on page 17, line 17, with the following rewritten paragraph.

In any case, temperature controllers 36 may include any type of mechanism with which to control the temperature of a fluid. For example, in some cases, temperature controllers 36 may include heaters and in some embodiments, specifically infrared heaters. An infrared heater may specifically offer a manner with which to efficiently and uniformly heat a fluid. In other embodiments, temperature controllers 36 may include coolers. In yet other cases, temperature controllers 36 may include heaters and coolers. For example, as noted above, in some embodiments it may be advantage to heat a fluid to a desired temperature to enhance the deposition rate of the fabrication process. In such an embodiment, however, it also may be beneficial to be able to cool the fluid such that the deposition process may be immediately terminated, allowing more control over the amount deposited upon the substrate. In addition or alternatively, the fluid within process chamber 22, as described in more detail below, may, in some embodiments, be recirculated back to one or both of intermediate tank/s 24 and storage tanks 26 during or subsequent to a fabrication process. In such an embodiment, it may be advantageous to have a temperature controller coupled

to the recirculation pipe such that the temperature of the fluid may be cooled back to the temperature specified for the zone to which it is returning. In any case, temperature controllers 36 may be adapted to monitor the temperature of a fluid and, therefore, may further include thermocouples in some embodiments.

Please replace the paragraph beginning on page 22, line 27, with the following rewritten paragraph.

Another mode of operation for system 20 may be when the fluid is delivered from intermediate tank/s 24 to process chamber 22 such that a fabrication step may be performed within the chamber. Such a mode of operation is illustrated in Fig. 1c by having the valve on the delivery pipe between the intermediate tank/s 24 and process chamber 22 open. In general, the fluid may be delivered from intermediate tank/s 24 to process chamber 22 just prior to or at the start of the fabrication process and during times in which the fluid within process chamber 22 is being replenished. As such, in some embodiments, the valve on the delivery pipe between the intermediate tank/s 24 and process chamber 22 may be closed during the “processing” mode of system 20. In other embodiments, however, the fluid within process chamber 22 may be continually replenished. In some embodiments, the rate of replenishment and/or the position of the valve on the delivery pipe between the intermediate tank/s 24 and process chamber 22 may be based on the degradation of the fluid during the fabrication process. In particular, the routing of fluid between intermediate tank/s 24 and process chamber 22 may depend on the life of the fluid affecting the reaction rate of the process. The determination of whether the life of the fluid is suitable to for the fabrication may involve using analytical tests to evaluate the fluid during the fabrication process or may be based on historical data of the system. In any case, the valve on the pipe connecting the delivery and recirculation pipes between intermediate tank/s 24 and processing chamber 22 may be closed or open, depending on whether the fluid within intermediate tank/s 24 is circulated during such a mode of operation.

Please replace the paragraph beginning on page 24, line 9, with the following rewritten paragraph.

A method for delivering a fluid to a process chamber of the microelectronic fabrication apparatus is illustrated in Fig. 2. In particular, the method may include step 70 in which a fluid, used to process microelectronic topographies, is stored within a storage tank of a microelectronic fabrication apparatus. Such a step may include controlling the temperature of the fluid within a preliminary temperature range. More specifically, the microelectronic fabrication apparatus may employ one or more temperature controllers with which to control the temperature of the fluid within the storage tank within a preliminary temperature range. In yet other embodiments, the environment in which the microelectronic fabrication apparatus is operated may be adapted to maintain the fluid within the storage tank within a preliminary temperature range. For example, the microelectronic fabrication apparatus may be operated in a temperature controlled environment which has a substantially similar operating range as the preliminary temperature range. In any case, the preliminary temperature range may preferably include temperatures which do not substantially degrade the life of the fluid as compared to other temperatures at which the fluid may be maintained. For example, in an embodiment in which the fluid is an electroless deposition solution, the preliminary temperature range may include temperatures between approximately 42° C and approximately 50° C. Higher or lower and larger or smaller ranges of temperatures, however, may be used for the preliminary temperature range, depending on the fabrication process to be conducted and the operating parameters of the fluid and the design specifications of the system.